UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,970	10/25/2001	Jeffrey R. Conrad	10006661-1	9711

7590 02/24/2005	**EXAMINER**
HEWLETT-PACKARD COMPANY	JOO, JOSHUA

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>25 October 2001</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-29</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-29</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____ .
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)   5) ☐ Notice of Informal Patent Application (PTO-152)
    Paper No(s)/Mail Date _____ .   6) ☐ Other: _____ .

1.   Claims 1-29 are presented for examination.

2.   Claims 1-29 are rejected.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-9, 11-17,19-26, 28-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ahearn et al, US Patent #5,926,463 (Ahearn hereinafter) and in view of Garg

et al, US Patent #6,327,677 (Garg hereinafter).

5.   As per claims 1 and 21, Ahern teaches an invention for viewing and managing the

configuration of a computer network: Ahern's invention comprises of:

        a)   Receiving information corresponding to the start node and the end node (Col 6,

lines 29-30. A workstation desires to communicate with a server.);

        b)   Receiving information corresponding to a type of path of interest (Col 7, line 67-

Col 8, line 6. User can select "Shortest Path.");

        c)   Receiving information corresponding to a type of connector of interest (Col 6,

lines 63-66; Col 7, lines 66-67. Receives information from corresponding switch, router, or

server.);

d)   Determining a path between the start node and the end node based upon the type of path of interest and the type of connector of interest (Col 6, lines 29-33; Col 7, lines 9-40. Network supervisor analyzes a path for the workstation and the connectors involved in the path.);

d)   Identifying at least one connector in said path (Col 6, lines 47-51. Network supervisor identifies servers, routers, and switches in the path.);

f)   Receiving data representative of an operating parameter from said at least one connector (Col 6, lines 51-52. Network supervisor obtains information from the devices.);

g)   Comparing said data to a predetermined value (Col 6, lines 51-54. Network supervisor analyzes information for difficulties in the communications path.); and

6.   Ahearn teaches of analyzing information for difficulties in the communication path. (Col 6, lines 51-54).

7.   Ahearn does not specifically teach of providing an indication if said data exceeds predetermined value.

8.   Garg teaches an invention for monitoring a network environment, where an indication is provided if the network utilization exceeds a predetermined value (Col 12, lines 24-30).

9.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ahern and Garg because both inventions deal with managing the network, where it involves the detection of problems within the network. Ahern's invention is to monitor the network, which includes detecting problems occurring in the network, thus it would be desirable to have an indication if the network utilization exceeds a predetermined

value. Thus, the teachings of Garg to provide an indication if the network utilization exceeds a predetermined value improves the user-friendliness of Ahern's invention by alerting the user of problems occurring in the network so that the network supervisor and the user of the system can take the proper actions to correct the problem.

10.   As per claim 13, Ahern teaches an invention for viewing and managing the configuration of a computer network: Ahern's invention comprises of:

   a)   A processor (Inherent);

   b)   A discovery mechanism associated with said processor, said discovery mechanism configured to generate and store topology data specifying connectors and segments of a network, said discovery mechanism being configured to determine a path between a start node and an end node based upon said topology data (Col 7, lines 12-17. Network supervisor can analyze the topology of the network, including the workstations and routers. Col 6, lines 3-22; Fig. 8. Network supervisor can obtain information regarding the network and its connections, and determine a suitable path.); and

   A connector evaluation mechanism associated with said processor said connector evaluation mechanism configured to:

   c)   Receive a parameter value from a connector in said path (Col 6, lines 51-52. Network supervisor obtains information from the devices.);

   d)   Comparing said parameter value to a predetermined value (Col 6, lines 51-54. Network supervisor analyzes information for difficulties in the communications path.); and

11.   Ahearn does not specifically teach of providing an indication if said data exceeds predetermined value.

12.   Garg teaches an invention for monitoring a network environment, where an indication is provided if the network utilization exceeds a predetermined value (Col 12, lines 24-30).

13.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ahern and Garg because both inventions deal with managing the network, which involves the detection of problems within the network. Ahern's invention is to monitor the network, which includes detecting problems occurring in the network, thus it would be desirable to have an indication if the network utilization exceeds a predetermined value. Thus, the teachings of Garg to provide an indication if the network utilization exceeds a predetermined value improves the user-friendliness of Ahern's invention by alerting the user of problems occurring in the network so that the network supervisor and the user of the system can take the proper actions to correct the problem.

14.   As per claims 2 and 22, Ahearn teaches the invention, wherein receiving information corresponding to a type of path of interest comprises receiving information corresponding to at least one of: all paths between the start node and the end node, and a shortest path between the start node and the end node (Col 7, line 66-Col 8, lines 6. User is able to view the Open Shortest Path First Area Topology.).

15.   As per claims 3 and 23, Ahearn teaches the invention, wherein said at least one path comprises at least one sub-network, wherein each of the sub-networks has at least one level 2 connector and at least one level 3 connector, each of the sub-networks being configured to

intercommunicate with another of the sub-networks via a level 3 connector, and wherein

receiving information corresponding to a type of connector of interest comprises receiving

information corresponding to at least one of: level 2 and level 3 connectors, and level 3

connectors (Col 7, lines 63-67. User can view the layer 3 elements e.g. routers. Col 13, lines

40-47. Shows layer 2. Col 5, lines 39-56; Col 6, lines 9-14; Col 13, lines 40-46; Fig. 8. User

can view layer 2 and layer 3 elements.).

16.   As per claims 4 and 24, Ahearn teaches the invention of claim 3, wherein when the type

of connectors of interest are level 3 connectors and wherein said determining a path between

the start node and the end node comprises: identifying sub-networks associated with the start

node; and determining whether the end nodes is associated with at least one of the identified

sub-networks (Col 12, lines 14-44. System performs a ping spray to identify all nodes and all

nodes on each respective subnet in order to learn new routers and associated networks.).

17.   As per claims 5 and 25, Ahearn teaches the invention, wherein said at least one path

comprises at least one segment and wherein the type of connectors of interest are level 2 and

level 3 connectors, determining a path between the start node and the end node comprises:

Identifying segments associated with the start node; and determining whether the end node is

associated with at least one of the identified segments. (Col 12, lines 14-44. System performs

a ping spray to identify all nodes and all nodes on each respective subnet in order to learn new

routers and associated networks. Col 13, lines 40-58. System performs a ping test to identify

the layer 2 topology.).

18.   As per claim 6, Ahearn teaches the method of claim 4, further comprising: recursively

identifying sub-networks associated with the each of the previously identified sub-networks if the

end node is not associated with at least of the identified sub-networks; and determining whether

the end node is associated with at least one of the sub-networks associated with the each of the

previously identified sub-networks (Col 12, lines 14-44. System periodically performs a ping

spray to learn new routers and their associated networks.).

19.   As per claim 7, Ahearn teaches the method of claim 5, further comprising: Recursively

identifying segments associated with the each of the previously identified segments if the end

node is not associated with at least one of the identified segments; and determining whether the

end node is associated with at least one of the segments associated with the each of the

previously identified segments (Col 14, line 14 – Col 15, line19. System performs a trace route

to identify nodes connected to each segment.).

20.   As per claim 8, Ahearn teaches the method of claim 2, wherein determining a path

between the start node and the end node comprises: storing a shortest path between the start

node and the end node in memory as a current shortest path; and if the type of path of interest

is the shortest path between the start node and the end node, recursively determining paths

between the start node and the end node based upon the type of connector of interest such

that, when a newly determined path between the start node and the end node is shorter than

the current shortest path, the current shortest path is replaced with the newly determined path

(Col 7, line 67-Col 8, line 6. User can select the OSPF. Col 7, lines 25-32. System can be

configured and updated. Col 12, lines 20-21. System can update topology information when

new routers and networks are learned.).

21.   As per claims 9, 17 and 26, Ahearn teaches the invention, wherein said operating

parameter is relative to the quantity of data passing through said least one connector (Col 6,

lines 47-53; Col 6, lines 34-36. Network supervisor can obtain information regarding network

devices. Parameter for viewing includes bandwidth utilization.).

22.   As per claims 11, 19, and 28, Ahearn teaches the invention, wherein said at least one

connector monitors itself and records errors detected by said monitoring, and wherein said

operating parameters is related to the errors recorded by said at least one connector (Col 6,

lines 47-53; Col 6, lines 34-36. Network supervisor can obtain information regarding network

devices. Parameter for viewing includes error rates.).

23.   As per claims 12, 20, and 29, Ahearn teaches the invention, wherein said least one

connector has a management information base associated therewith and wherein said

operating parameter is data stored in said management information base (Col 7, line 66 – Col 8,

line 6. Router has management information.)

24.   As per claim 14, Ahearn teaches the system of claim 13, wherein said discovery

mechanism has a probable path mechanism configured to determine a path between the start

node and the end node based upon said topology data (Col 7, line 66-Col 8, line 8. User can

modify properties of routers. Col 6, lines 23-54. User can determine the path from the

workstation to the server.).

25.   As per claim 15, Ahearn teaches the system of claim 13, wherein said discovery

mechanism has means for determining a path between the start node and the end node based

upon said topology data (Col 7, line 66-Col 8, line 8. User can modify properties of routers. Col

6, lines 23-54. User can determine the path from the workstation to the server.).

26.   As per claim 16, Ahearn teaches the system of claim 14, wherein said probable path

mechanism is configured to receive information corresponding to a type of path of interest,

receive information corresponding to a type of connector of interest, and determine a path

between the start node and the end node based upon said type of path of interest and said type

of connector of interest (Col 7, line 66-Col 8, lines 11. User can configure routers and

determine a path of interest.).

27.   Claims 10, 18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ahearn, US Patent #5,926,463 and Garg, US Patent #6,327,677 and in view of Preissman, US

Patent #6,684,237.

28.   As per claims 10, 18, and 27, Ahearn does not teach the invention, wherein said at least

one connector has a data storage device associated therewith and wherein said operating

parameter is relative to the available space on said data storage device.

29.   Preissman teaches an invention for enabling an interface associated with a router,

where Preissman teaches determining whether the available memory of the storage area of the

router is greater than predefined memory parameters (Col 11, lines 8-16).

30.   It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine the teachings of Ahearn and Preissman because the teachings of Preissman

to determine whether the available memory of the storage area of the router is greater than predefined memory parameters improves the efficiency of Ahearn's invention by preventing deactivation of devices due to resource overload, thus maintaining the integrity of the network.

Conclusion

31.   A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

32.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966 and fax number is 571 273-3966. The examiner can normally be reached on Monday to Thursday 8 to 5:30.

33.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on 571 272-3964.

34.   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 8, 2005
JJ

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